

**REMARKS**

**Supplemental Information Disclosure Statement (IDS)**

Applicants enclose, for Examiner's consideration, copies of the documents identified on the attached supplemental IDS, in accordance with 37 CFR § 1.56. These documents were recently brought to Applicants' attention. Also, in accordance with 37 CFR § 1.97 (c), the petition fee set forth in § 1.17(p) is enclosed.

Although there was previously a final action issued in connection with the present application, the finality was withdrawn in the office action under response. The MPEP states at § 609 B(2) that "If a final action or notice of allowance is mailed in an application and later withdrawn, the application will be considered as not having had a final action or notice of allowance mailed for purposes of considering an information disclosure statement." Accordingly, the above-referenced IDS is being filed under 37 CFR § 1.97 (c), instead of 37 CFR § 1.97 (d).

**Amendments**

The specification has been amended to correct typographical errors. It is respectfully submitted that no new matter has been introduced by way of these amendments.

Previous claims have been cancelled and new claims have been submitted in view of Examiner's rejections. Support for the polyolefin recited in claim 12 can be found on page 4 at lines 19-21. The filler concentration recited in claims 12, 19 and 26 can be found on page 8 at lines 22-25. The second polymer composition of claim 12 is selected from elastomers (see page 7, line 24 to page 8, line 2) and plastomers (see page 6, lines 27-29). Support for the WVTR ranges of claims 12, 15, 19 and 20 can be found on page 3 at lines 29-30.

Support for the SIS and SBS elastomers recited in claim 13 is found on page 7 at lines 27-28. Page 6, line 25 through page 7, line 21 includes a discussion of suitable polyolefins in support of claims 16, 22 and 26. Reference to the filler recited in claim 17 is found on page 9 at lines 13-14. Support for embossing in claims 19, 21 and 28 is

found on page 11 at lines 1-5. The second polymer concentration range recited in claim 14 is discussed on page 7 at lines 28-29. Despite the disclosed concentrations being specifically directed to elastomers, such concentrations are inherently applicable to plastomers as well, which share many of the physical attributes of elastomers.

Support for claim 19 which is directed to a film composite having two layers can be found on page 11 at lines 15-16. Types of material for the second layer recited in claims 19, 25 and 26 can be found on page 11 at lines 16-19.

It is respectfully submitted that no new matter has been introduced by way of these claim amendments.

**Prima Facie Case of Obviousness Not Established**

In accordance with MPEP § 2142, Examiner must meet three basic criteria to establish a *prima facie* case of obviousness. Citing *In re Vaeck*, 20 USPQ2d 1438 (Fed. Cir. 1991), MPEP § 2142 describes the three criteria as follows:

"First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. [Moreover,] the teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on the applicant's disclosure." (emphasis added)

Therefore, Applicants respectfully submit that Examiner has not established a *prima facie* case of obviousness in view of the three criteria identified above and the remarks provided under the third office action dated January 21, 1999. In the Office Action under response, Examiner stated in his 1<sup>st</sup> rejection: "At the time of invention one of ordinary skill in the art would have found it obvious to have passed a film through a nip formed by two interdigitating grooved rollers thereby causing lateral stretching, as taught by Schwarz, in the process of Sheth, since Schwarz suggests that such ring-rolling will provide orientation in a preferred direction for an orientable thermoplastic blended film containing an incompatible second phase without causing fibrillation."

In his 2<sup>nd</sup> rejection, Examiner stated: "At the time of invention one of ordinary skill in the art would have found it obvious to have used commercially available SBS or SIS elastomers, as commonly practiced in the art, in the process of Sheth, in order to increase pliability of the film".

As discussed in more detail below with respect to each rejection, Examiner has not established a *prima facie* case of obviousness in either of his two rejections in the Office Action under response. First, Examiner has failed to show a suggestion or motivation to combine the references themselves or, in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, if such motivation to combine can be shown, Examiner has not shown that there would be a reasonable expectation of success for a person of ordinary skill in the art to follow through with such motivation. Finally, Examiner has failed to show that the teaching or suggestion to make the claimed combination and the reasonable expectation of success are both be found in the prior art. Instead, Examiner is incorrectly relying on the benefit of hindsight reconstruction based on Applicants' disclosure.

**1<sup>st</sup> Rejection under 35 U.S.C. § 103 (a)**

Examiner has rejected claims 1-11 (now cancelled) under 35 U.S.C. § 103(a) over U.S. Patent 4,777,073 by Sheth ('073) in view of U.S. Patent 4,116,892 by Schwarz ('892). Examiner concedes that Sheth '073 does not teach passing a precursor film through two interdigitating grooved rollers for laterally stretching the film, but that Schwarz '892 does. Furthermore, Examiner notes that both the '073 and '892 patents are combinable because they are from the same field of endeavor, namely, forming and stretching polyolefin films. Therefore, Examiner concludes that, because Schwarz '892 applies its ring rolling process (i.e., using two interdigitating grooved rollers to laterally stretch a thermoplastic film) to a thermoplastic blended film containing an incompatible second phase (i.e., a filler), one skilled in the art would find it obvious to apply the stretching process taught by Schwarz '892 to the process of Sheth '073.

In view of Applicants' new claims, Applicants respectfully traverse Examiner's rejection for the reasons provided below. In summary, Applicants stipulate that Sheth '073 contemplates the breathable films disclosed therein could and would be stretched

using conventional equipment and processes (see 4:29-36). Although the ring rolling process is not as widely used as processes using two rollers at different speed settings, for machine direction stretching, or a tentering device, for transverse direction stretching, it is sufficiently well known to those skilled in the art to make it a conventional film stretching process. Accordingly, the new claims have been restricted to include additional limitations to the films stretched by a pair of interdigitating grooved rollers (i.e., a ring rolling process). New independent claim 12 is additionally restricted to stretching films comprising polyolefin/elastomer and/or plastomer blends, while new independent claim 19 is additionally restricted to stretched films comprising at least a film layer and a fiber layer. Applicants respectfully submit that these additional limitations now make Examiner's obviousness rejection of the now cancelled claims inapplicable to new claims 12-28 for the following reasons.

Examiner's assertion that Sheth '073 and Schwarz '892 are combinable because they are "from the same field of endeavor" does not conform with the test for obviousness outlined under *Graham v. John Deere*, 383 U.S., 148 USPQ 459 (1966). Applicants believe that Examiner has confused the task of identifying references generally related to the subject matter of Applicants' claims with the task of determining whether there is a suggestion or motivation to combine the references. Certainly, MPEP 2141.01(a) provides that the reference(s) selected by Examiner "must be either in the field of applicant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the inventor was concerned" (citing *In re Oetiker*, 24 USPQ2d 1443, 1445 (Fed. Cir. 1992)). Examiner has cited references generally related to the subject matter of Applicants' claims. However, such references are not, *ipso facto*, entitled to a presumption that they are "combinable." Examiner must also specifically identify a teaching, suggestion or motivation to either modify or combine such reference(s).

Also, to the extent the Examiner does identify a sufficient basis for combining the cited references, Applicants believe that Examiner will not be able to point to the specific passage(s) in either reference that would motivate one skilled in the art to (a) combine Schwarz '892 and Sheth '073, (b) reasonably expect such combination to succeed, and (c) produce the Applicants' invention as recited in the new claims provided above. Moreover, to the extent that Examiner relies on common knowledge in the art or "well-

known" prior art to support the combination of Schwarz '892 and Sheth '073, Examiner is respectfully requested: (1) to specify that he is taking judicial notice of facts outside the record to support his rationale to combine those references; (2) to precisely identify the facts that he considers to be of such notorious character that judicial notice can be taken; and (3) in accordance with MPEP § 2144.03, to cite a reference in support of such judicial notice.

New independent claim 12, discussed more fully below under remarks for the 2<sup>nd</sup> rejection, is directed to a process for producing a film having a WVTR greater than 200 g/m<sup>2</sup>/day at 38 °C and 90% relative humidity from a polyolefin blend comprising a polyolefin and an elastomer, plastomer or combination thereof.

New independent claim 19 recites a film composite having a WVTR greater than 200 g/m<sup>2</sup>/day at 38 °C and 90% relative humidity. None of the references cited by the Examiner alone or in combination with each other would appear to motivate one skilled in the art to produce such a film composite or laminate stretched by using a ring rolling process. Only U.S. Patent 4,517,714 by Sneed suggests that a nonwoven fabric barrier layer could be produced using a ring rolling process and "at least two adjacent plies of microfine fiber webs" (see 2:39-41). However, the process of new claim 19 requires that at least one of two or more layers is a polyolefin film web, rather than a fiber web, as suggested by Sneed.

Applicants believe that, in view of Sneed '714, one skilled in the art of film stretching would not be motivated to produce a laminate having at least one polyolefin film (i.e., nonfiber) layer for the following reason. The increase in liquid strikethrough resistance that would arise from laminating a film layer with a fiber layer would substantially reduce the WVTR required for the types of barrier uses suggested by Sneed '714. Thus, one skilled in the art would expect that laminating a film layer with a fiber layer might improve liquid strikethrough resistance, but would result in losing the desired air breathability, which is a critical attribute of the laminates disclosed in Sneed '714. Sneed '714 is directed to producing outercover apparel items (e.g., lab coats, artists' smocks, hospital scrub clothes, rainwear and the like) that provide sufficient liquid strikethrough resistance, but high air porosity in order to provide greater comfort to the wearer (see 1:15-26).

Also, Sneed failed to disclose film/fiber laminates, which at the time of his invention, were well known for use as barriers having improved liquid strikethrough resistance, but poor breathability. If Sneed reasonably expected that the ring rolling process would have produced sufficiently high air porosity for such composites they would have been disclosed. Consequently, one skilled in the art reading Sneed '714, where the intent is to produce an outercover apparel item with high air porosity, would be discouraged from laminating a film layer with a fiber layer using a ring rolling process to produce a barrier with improved liquid strikethrough resistance without commensurate loss of air breathability or WVTR. Accordingly, new claim 19 is novel and nonobvious in view of Sneed '714 alone or in combination with Sheth '073 and/or Schwarz '892.

Schwarz '892 discloses the use of interdigitating grooved rollers (also known as a ring rolling process) on a thermoplastic orientable polymer (e.g., polypropylene) or a polymer blend, although no specific polymer blends are suggested or specified, blended with 10 wt. % clay filler. Therefore, Examiner concludes this disclosure makes obvious the application of a ring rolling process to a thermoplastic orientable polymer with significantly higher loadings of filler, such as those disclosed in Sheth '073. Also, there is nothing in either Schwarz '892 or Sheth '073 to suggest, teach or motivate one skilled in the art to (a) apply a ring rolling process to a composite of a first layer of a thermoplastic orientable polymer with filler loadings greater than about 15 wt. % and a second film or fiber layer and (b) reasonably expect to successfully produce a film composite with the WVTR range recited in new claim 19.

Examiner has concluded, without support, that the examples of Schwarz '892 (more specifically, Examples VIII, IX and X) would suggest the ring rolling process could be applied to thermoplastic orientable polymer with filler loadings greater than about 15 wt. %. Alternatively, Examiner has reached this conclusion by taking judicial notice of facts not of record. However, there is no such suggestion, whatsoever, in either Schwarz '892 or Sheth '073. In fact, Schwarz '892 suggests that his invention was developed to address the problem of fibrillation (i.e., internal fiber formation) typically encountered with polymers blended with an incompatible second phase. However, the highest inorganic filler loading suggested throughout Schwarz '892 is 10 wt. %.

Therefore, what fact would suggest to one skilled in the art that a ring rolling process could be successfully applied to a thermoplastic polymer inorganic filler composition, more particularly, a film composite with a filler loading greater than about 15 wt. %, to produce a stretched film having a WVTR greater than 200 g/m<sup>2</sup>/day at 38 °C and 90 % relative humidity? Examiner seems to rely on Sheth '073, or, possibly, is taking judicial notice of a fact not of record and not apparent to Applicants. Again, Applicants respectfully remind Examiner that Sheth '073 makes no suggestion whatsoever to produce a film composite, wherein at least two layers of the composite are simultaneously passed through a ring rolling process.

Finally, Schwarz '892 did not contemplate the polymer/filler compositions disclosed by Sheth some nine years later. Hence, Schwarz '892 could not provide a suggestion to one skilled in the art to apply a ring rolling process for stretching a polymer/filler composition having greater than about 15 wt. % inorganic filler. Therefore, absent some fact not yet made of record, Applicants believe that Examiner's reliance on the Schwarz '892 polymer/filler examples having 10 wt. % inorganic filler is insufficient to produce a *prima facie* case of obviousness in view of the *Graham v. John Deere* criteria outlined above.

For the reasons stated above, Examiner's rejection under 35 U.S.C. § 103 (a) over Sheth '073 in view of Schwarz '892, insofar as it might apply to the new claims, must be withdrawn.

## **2<sup>nd</sup> Rejection under 35 U.S.C. § 103 (a)**

Examiner specifically rejected polyolefin/elastomer film blends previously recited under claim 4 (now cancelled, but recited under new claim 12) under 35 U.S.C. § 103(a) over Sheth '073 in view of the commercial availability of SBS or SIS elastomers and the allegedly well known property to those skilled in the art that adding SBS or SIS elastomers would increase the pliability of a film.

Applicants acknowledge that Sheth '073 indicates that "Other compounds such as elastomers, stabilizers against heat or ultraviolet rays, pigments, antistatic agents, etc. may be added to the compositions in the conventional manner" at 5:42-45. Examiner will note that Sheth '073 does not suggest using any elastomer as a polymer blend component

in his discussion of the polyolefins suitable for forming a stretched film using a ring rolling process.

Specifically, Sheth's discussion regarding polymer blend components at 1:65 to 2:1, which states: "The polyolefin component may be any polyolefin which is suitable for film production, such as propylene, copolymers of propylene, homopolymers and copolymers of ethylene and blends thereof." (emphasis added). Clearly, if Sheth had contemplated a polymer composition based on a polyolefin/elastomer blend, he would have listed elastomers in his group of polymers suitable for blending at several weight percent or higher.

The addition of an elastomer in Sheth '073, however, is clearly contemplated as an additive only, because elastomer is listed along with other additives which are conventionally added at concentrations of about 10 ppm (0.001 wt.%) to 1000 ppm (0.1 wt.%), such as stabilizers, pigments and antistatic agents. It is well known to those skilled in the art that such additives are typically added at the parts per million level, not at the parts per hundred level. There is a difference of 4 orders of magnitude between ppm and parts per hundred. Accordingly, one skilled in the art would not be motivated to either add or blend pph levels of elastomer with a polyolefin in view of Sheth '073.

Moreover, a person of ordinary skill in the art knows that an elastomer typically has the effect of reducing the WVTR of a film produced therefrom. Hence, this fact would discourage a person of ordinary skill in the art from considering blending an elastomer with a polymer composition (a) at the parts per hundred level, and (b) for forming a film having a WVTR greater than 200 g/m<sup>2</sup>/day. Also, there is nothing in either Schwarz '892 or Sheth '073 to suggest, teach or motivate one skilled in the art to (a) apply a ring rolling process to a polyolefin/elastomer and/or elastomer blend with filler loadings greater than about 15 wt. % and (b) reasonably expect such polymer/filler compositions to successfully produce a film with the WVTR range recited in new claim 12. Also, Sheth '073 only generally refers to polypropylene copolymers and homo- and copolymers of ethylene and blends thereof (see 1:65-68). However, Sheth '073 specifies that a propylene/low density ethylene copolymer and linear low density polyethylene are preferred ethylene polymers suitable for film production (see 2:1-3). Accordingly, one



skilled in the art would not be motivated to blend a very low density polyethylene (i.e., a plastomer) which has physical attributes of an elastomer, with another polyolefin.

Accordingly, Applicants respectfully submit that new claim 12 is not obvious in view of Sheth '073, alone or in combination with knowledge generally available to one of ordinary skill in the art.

For the reasons stated above, Examiner's rejection under 35 U.S.C. § 103 (a) over Sheth '073 in view of knowledge generally available to one of ordinary skill in the art, insofar as it might apply to the new claims, must be withdrawn.


### **Conclusion**

Applicants believe that the arguments presented herein are sufficient to overcome Examiner's rejections.

Applicants also believe that the present application has been patentably distinguished over all of the cited documents and is in good condition for allowance. Accordingly, Applicants respectfully request that Examiner reconsider Applicants' application in view of the arguments presented herein and allow all claims, as amended.

Respectfully submitted,

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May 12, 1999  
Date of Signature

  
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